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PTO/SB/05 (03-01)

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No.	1875.1640000
First Inventor	Reza-ur Rahman Khan
Title	Ball Grid Array Package Substrates and Method of Making the Same
Express Mail Label No.	

APPLICATION ELEMENTS
See MPEP chapter 600 concerning utility patent application contents.**ADDRESS TO:**Assistant Commissioner for Patents
Box Patent Application
Washington, DC 202311. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original, and a duplicate for fee processing)2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.3. ☒ Specification [Total Pages 29]
(preferred arrangement set forth below)

- Descriptive title of the Invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R & D
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 8]

Oath or Declaration [Total Pages 2]

a. ☒ Newly executed (original or copy)b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 18 completed)i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s)
named in the prior application, see 37 CFR §§
1.63(d)(2) and 1.33(b).6. ☒ Application Data Sheet. See 37 CFR 1.76.7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program
(Appendix)8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)a. ☐ Computer Readable Form (CRF)

b. Specification Sequence Listing on:

i. ☐ CD-ROM or CD-R (2 copies); orii. ☐ paperc. ☐ Statements verifying identity of above copies**ACCOMPANYING APPLICATION PARTS**9. ☐ Assignment Papers (cover sheet & document(s))10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)11. ☐ English Translation Document (if applicable)12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS
Citations13. ☐ Preliminary Amendment14. ☒ Two Return Receipt Postcards (MPEP 503)
(Should be specifically itemized)15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach
form PTO/SB/35 or its equivalent.17. ☒ Other: Authorization under 37 C.F.R. § 1.136(a)(3)☐ Other: The name of the assignee is:18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment,
or in an Application Data Sheet under 37 CFR 1.76:☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP)

Prior application information: Examiner _____

of prior application No: ____/____

Group/Art Unit: _____

BEST AVAILABLE COPYFor CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is
considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only
relied upon when a portion has been inadvertently omitted from the submitted application parts.**19. CORRESPONDENCE ADDRESS**☒ Customer Number or Bar Code Label

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PATENT TRADEMARK OFFICE

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or ☐ Correspondence address below

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SIGNATURE	<i>Jeffrey S. Weaver</i>	Date	12-18-01

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

ATTORNEYS AT LAW

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J1131 U.S. PTO
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12/18/01

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*LIMITED TO MATTERS
AND PROCEEDINGS BEFORE
FEDERAL COURTS & AGENCIES
**REGISTERED PATENT AGENT
***SENIOR COUNSEL

December 18, 2001

WRITER'S DIRECT NUMBER:
(202) 218-7831

INTERNET ADDRESS:
JWEAVER@SKGF.COM

Commissioner for Patents
Washington, D.C. 20231

Box Patent Application

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)
Appl. No. To be assigned; Filed: December 14, 2001
For: **Ball Grid Array Package Substrates and Method of Making the Same**
Inventors: Khan *et al.*
Our Ref: 1875.1640000

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.
Patent and Trademark Office:

1. PTO Fee Transmittal (Form PTO/SB/17) (in duplicate);
2. PTO Utility Patent Application Transmittal (Form PTO/SB/05);
3. U.S. Utility Patent Application entitled:

Ball Grid Array Package Substrates and Method of Making the Same

and naming as inventors:

**Reza-ur Rahman Khan
Chong Hua Zhong**

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Commissioner for Patents
December 18, 2001
Page 2

the application consisting of:

- a. A specification containing:
 - i. 23 pages of description prior to the claims;
 - ii. 5 pages of claims (30 claims);
 - iii. a one (1) page abstract;
- b. 8 sheets of drawings (Figures 1A, 1B, 2A, 2B, 3-7, 8A, 8B, 9);
- c. An original executed Declaration; and
- d. Application Data Sheet;
4. Authorization to Treat a Reply As Incorporating An Extension of Time Under 37 C.F.R. § 1.136(a)(3) (in duplicate);
5. Two (2) return postcards; and
6. Our check No. 33568 for \$ 1,172.00 to cover:

\$ 740.00 Filing fee for patent application;
\$ 180.00 Fee for excess total claims; and
\$ 252.00 Fee for excess independent claims.

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It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036. A duplicate copy of this letter is enclosed.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Jeffrey S. Weaver
Attorney for Applicant
Registration No. 45,608

JSW/asl
Enclosures

FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

Complete if Known

Application Number	To be assigned
Filing Date	December 18, 2001
First Named Inventor	Reza-ur Rahman Khan
Examiner Name	To be assigned
Group Art Unit	To be assigned
Attorney Docket No.	1875.1640000

TOTAL AMOUNT OF PAYMENT

(\$1,172.00)

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:

Deposit Account Number

19-0036

Deposit Account Name

Sterne, Kessler, Goldstein & Fox P.L.L.C.

- ☐ Charge Any Additional Fee Required
Under 37 CFR §§ 1.16 and 1.17

- ☐ Applicant claims small entity status
See 37 CFR 1.27

2. ☒ Payment Enclosed:

☒ Check ☐ Credit card ☐ Money Order ☒ Other*

*Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 19-0036.

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
101	740	201	370	Utility filing fee	\$740.00
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	

SUBTOTAL (1) (\$) 740.00

2. EXTRA CLAIM FEES

	Extra	Fee from below	Fee Paid
Total Claims 30 - 20** = 10	X 18		= \$180.00
Indep. Claims 6 - 3 ** = 3	X 84		= \$252.00
Multiple Dependent 0	0		= 0

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claim
108	84	209	42	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 432.00

** or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,960	228	980	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	130	123	130	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	481	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify):

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Other fee (specify):

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

SUBMITTED BY

Name (Print/Type)

Jeffrey S. Weaver

Registration No.
(Attorney/Agent)

45,608

Telephone

202-371-2600

Signature

Jeffrey S. Weaver

Date

12-18-01

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Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Khan *et al.*

Appl. No. To be assigned

Filed: December 18, 2001

For: **Ball Grid Array Package
Substrates and Method of Making
the Same**

Confirmation No. n/a

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 1875.1640000

J1059 U.S. PRO
10/020207



**Authorization To Treat A Reply As Incorporating An Extension Of
Time Under 37 C.F.R. § 1.136(a)(3)**

Commissioner for Patents
Washington, D.C. 20231

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply. A duplicate copy of this authorization is enclosed.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jeffrey S. Weaver
Attorney for Applicants
Registration No. 45,608

Date: 12-18-01

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